

REMARKS/ARGUMENTS

Claims 15 - 17, 19 - 24, 26,33, and 36, 38 - 44 are pending.

By this amendment, Claims 15, 22, 23, 36, 38-39 and 42 are amended, Claims 34 and 37 are canceled, and Claim 44 is newly added.

The amendment to Claim 22 is believed to obviate the objection to that claim.

The cancellation of Claims 34 and 37 and the amendments to Claims 38-39 and 42 are believed to overcome the rejections those claims under § 112.

In the Office Action mailed January 9, 2007, Claims 15 - 17, 19 - 24, 26, 38 and 42-43 were rejected as unpatentable over US 2004/0093042 (Altshuler et al) in view of U.S. 2004/0173780 (Altshuler et al). Claims 33 and 36 were rejected as being unpatentable over US 2004/0093042 (Altshuler et al) in view of U.S. 2004/0173780 (Altshuler et al) and further in view of U.S. 6,120,497 (Anderson et al). Claim 40 was rejected as unpatentable over US 2004/0093042 (Altshuler et al) in view of U.S. 2004/0173780 (Altshuler et al) and U.S.5,885,274 (Fullmer). Claim 41 was rejected as unpatentable over US 2004/0093042 (Altshuler et al) in view of U.S. 2004/0173780 (Altshuler et al) and US Application 2005/017850 (Vaynberg).

The Office Action, prior actions, and cited prior art have been studied in light of the relevant case law. On this basis, Applicants respectfully submit that the pending claims are patentably distinct from the cited prior art.

In particular, certain elements of Claim 15 are not found in the cited combination of references. At Paragraph [0030], Altshuler 3042 discloses that “wrinkle removal through collagen stimulation” can be achieved and specifies that heating a “subsurface region” to a temperature between 37.5 and 45C may stimulate generation of new collagen or elastin. However, there is no teaching of the use of light energy to heat a volume of dermis in the skin which is at a depth of between 1 mm to 5 mm below the upper surface of the skin, to a treatment temperature which is at least 50°C, wherein the skin is tightened as a result of heating the volume of dermis. The Office Action states that “Altshuler et al ‘3042 further teach an irradiation wavelength of from 1050 to 1250 nanometers (paragraph 0010), which is well known to penetrate tissue from about 2 – 5 millimeters.” Whether this is the case or not, it provides no teaching of the recited treatment temperature of at least 50°C.

Moreover, the Office Action identifies Altschuler 3042 at Paragraph [0012] as disclosing a range of treatment times from 2 seconds to 2 hours. However, this range is so broad relative to the 1.2 – 5 second range recited in the claims that it cannot reasonably be said to possess sufficient

specificity as to disclose the recited range of 1.2 – 5 seconds. *See Autofina v. Great Lakes Chemical Corp.* 441 F.3d 991, 999 (Fed. Cir. 2006). The treatment time ranges in Altshuler's Table 1 are likewise too broad to be said to disclose the range set forth in Claim 15.

Altshuler 7380 likewise fails to provide the teachings missing from Altshuler 3042. In particular, Altshuler 3042 discloses a skin rejuvenation method involving heating at a depth 100 – 500 μ , and does not provide a temperature to which the tissue is heated. Thus, the reference does not teach the use of filament light energy to heat a volume of dermis in the skin which is at a depth of between 1 mm to 5 mm below the upper surface of the skin, *to a treatment temperature which is at least 50°C*, wherein the skin is tightened as a result of heating the volume of dermis. Moreover, Altshuler 7380 discloses the use of very short pulse-width flash lamp pulses for the disclosed skin rejuvenation treatment (Paragraph [0089]) and lacks any teaching that would disclose or suggest transmission of light energy to the skin for a continuous period of time of between approximately 1.2 (one and two-tenths) seconds and 5 (five) seconds to achieve the necessary heating.

The Anderson patent is cited as teaching “a method for treating wrinkles with radiation at depths from 100 microns to 1.2 millimeters” and as teaching “the known property of collagen to shrink, at temperatures from 60°C to 70°C.” However, combining the Anderson patent with the cited Altshuler applications would *lead one away* from the claimed combination. In particular, modifying the teachings of the Altshuler references using the identified teachings of Anderson would lead one to elevate the skin temperature at depths of 100 microns to 1.2 millimeters to temperatures of 60°C to 70°C. The combination would thus fail to include the teachings of the claims calling for heating a volume of dermis in the skin, which is at a depth of between 1 mm to 5 mm below the upper surface of the skin, *to a treatment temperature which is at least 50°C* while maintaining the regions of the dermis at depths shallower than 1 mm at temperatures below the treatment temperature. Moreover, since Anderson as well as the other references lacks the teaching of a transmission time of 1.2 – 5 seconds, the combination of references does not render Claim 15 obvious.

The Fullmer and Vaynburg references also appear to lack the teachings missing from the Altshuler and Anderson references. Accordingly, Claim 15 as well as Claims 16-17, 19-22, 33, 38, 40 and 41 that are dependent on Claim 15, are patentable over the cited art.

Claim 23 includes the step of :

“transmitting light energy from the light source through the transmissive material to the skin, wherein light energy is transmitted through the transmissive material to the

skin for a continuous period of time of between approximately 1.2 (one and two-tenths) seconds and 5 (five) seconds, and wherein the transmitted light energy operates to heat a volume of dermis in the skin, which is at a depth of between 1 mm to 5 mm below the upper surface of the skin, to a treatment temperature which is at least 50°C while maintaining the regions of the dermis at depths shallower than 1 mm at temperatures below the treatment temperature, wherein the skin is tightened as a result of heating the volume of dermis.” Claims 24, 26, 36, 39 and 42-44 are dependent on Claim 23 and thus include the elements of Claim 23. For the reasons set forth with respect to Claim 15, Claim 23 and its dependent claims are patentable over the teachings of the cited references.

In view of the foregoing, it is respectfully submitted that all claims are allowable over the cited references. Early reconsideration and allowance of the claims is therefore respectfully requested

Respectfully submitted,

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